

REMARKS

The examiner's comments at cited references have been carefully considered. All previously submitted claims have been cancelled and new Claim 12 added. Claim 12 is believed to distinguish over the art of record and that cited by the examiner.

A detailed explanation of the applied art, the Ballinger '652, Nickell, et al. '785 and Pace '299 patents follows.

Ballinger'652 is a railroad crossing warning system of substantially different operation than applicant's claimed system. Ballinger discloses the usual crossing warning array of flashing lights and gates – those are well known in the art and required by law at every guarded crossing. The technology advancements in the art have been in activating those warning arrays. For Ballinger, the invention involves a railroad rail shunting system wherein an electrical pulse signal that is sent on one the track rails. When a train approaches the crossing, the steel wheels and axle of the train create a circuit from one rail through the steel wheel and axle, down the other wheel and to the other rail. This is a shunt from one rail to the other. Ballinger's circuit, termed by him a "motion detector" senses the return, shunted signal on the other rail and through calculating impedance, determines the proximity the steel wheel and axle shunt. When the shunt voltage reaches a threshold level, the electronic controller of Ballinger triggers the warnings. The shunting system, as used by Ballinger, is in common use on railroad/highway crossings.

Nickel, et al. '785 is not a railroad/highway crossing warning system but is a portable system designed to protect track work crews wherever they may be working on a track section. Nickell provides an annunciator which would be set down on the job site

with each worker to carry a personal transceiver RF connected to the annunciator. A master sensor for determining the approach of a train is co-located with the annunciator and multiple, or at least two, slave sensors are placed up and down the track from the work site. The relevant portion of Nickell applied by the examiner is at Col. 4 describing a slave sensor 120 which is stated to be a “rugged and waterproof module nailed or otherwise secured to a cross tie between the rails of the track.” The sensor 120 uses a Doppler microwave sensor.

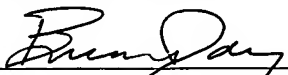
Combining Ballinger and Nickell pursuant to the examiner’s construction, the hypothetical result is a crossing warning system actuated by a Doppler radar unit. Nickel teaches only that the Doppler radar unit is mounted on the crosstie between the rails. There is no disclosure of it being positioned anywhere else.

In distinction, applicant’s Claim 12 is quite specific that the Doppler radar unit is positioned above the ground surface and is spaced apart from the railroad track and its associated rails, cross ties or roadbed. It is characterized by the absence of operational attachment to the railroad track. This distinction is meaningful because it enables the system to operate effectively as intended by applicant. It is apparent from the Nickell disclosure that the inventor viewed the use of a Doppler radar unit as an afterthought and gave no consideration as to how it might be employed. The applicant of the present invention has developed a functional, working device that has met with initial success, and the structure of Claim 12 is targeted to that successful device and is functional, unlike Nickell. The Claim 12 structure is unlike the combination of Ballinger and Nickell and the two cannot properly be used in a Section 103 rejection.

Pace, the other reference applied by the examiner, leads further afield, for Pace uses as his sensor not a Doppler radar unit, but a magnetometer set a distance away from the warning device and connected to it by buried cables.


With the distinctions, which are not shown, disclosed or in any way suggested by any of the applied or cited prior art, the application containing single Claim 12 is believed allowable. Please call the below attorney if prosecution can be furthered.

Respectfully submitted,

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I certify that on the 28 day of July 2006 this document is being deposited with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Hon. Commissioner of Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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